

A Vision for Collaborative Landscape Planning:

Deliberation among Representations of Plans



A handwritten signature in green ink that reads "Lewis D. Hopkins". The signature is stylized with a large, sweeping flourish at the end.

Lewis D. Hopkins

Department of Urban and Regional Planning
University of Illinois at Urbana-Champaign

The landscape in which we work will have many actors and many plans

many plans of different scopes
functional, jurisdictional, spatial, and temporal

Authority is distributed

- Interdependence is not uniformly distributed
- Need for plans depends on events
- Must decompose problems
to be feasible to think about

1 Information System of Plans approach

2 Examples of Information System of Plans

3 Tools and techniques to support this approach

1

Idea of Information System of Plans (ISoPs) or PlanWebs

**In contrast to conventional wisdom,
but not so different from
conventional practice**

Plan

Conventional Wisdom

- Take two years to make a comprehensive plan for 20 years
- Implement the plan

Conventional Practice

- When events trigger need, make a plan, yielding lots of different plans
- Use plans when making decisions

Visioning

Conventional Wisdom

- Bring everyone together to create shared vision as future image and goals
- Try to associate with actions

Conventional Practice

- Use multiple forums to discover and create coalitions for action
- Use plans to achieve action

rather than

focus on **a** plan or **a** vision
and try to implement it

- Use an ISoP to
 - Focus on choices among actions
 - find information in many plans of many actors
 - form coalitions, reach consent, and understand intentions of others

Instead of YAPping---

(making Yet Another Plan)

Use an ISoP to

Compare and contrast existing plans and regulations
in relation to issues and proposals

Analyze how current plans and regulations
protect or threaten installation capabilities

Fill in gaps and interpret differences among
plans and regulations of many different actors

2

Examples of
Information System of Plans approach

McHenry County Legacy Planning

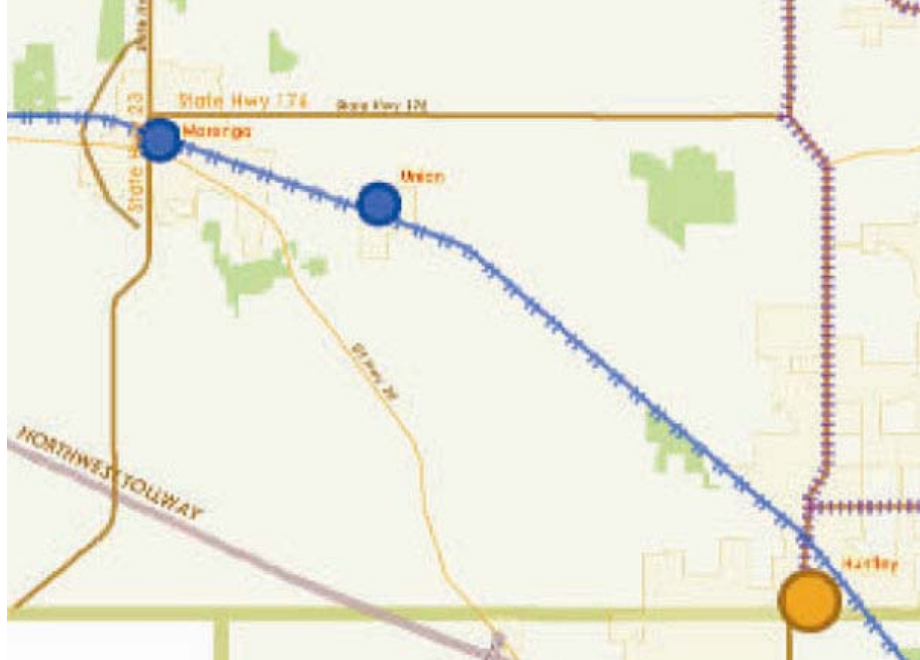
Legacy planning—one potential gap or opportunity
re cultural, agricultural, and environmental protection

LEAM to model relationships of infrastructure investments
and regulations, land development patterns, and
impacts

McHenry County Information System of Plans

currently includes over 40 plans and ordinances,
including:

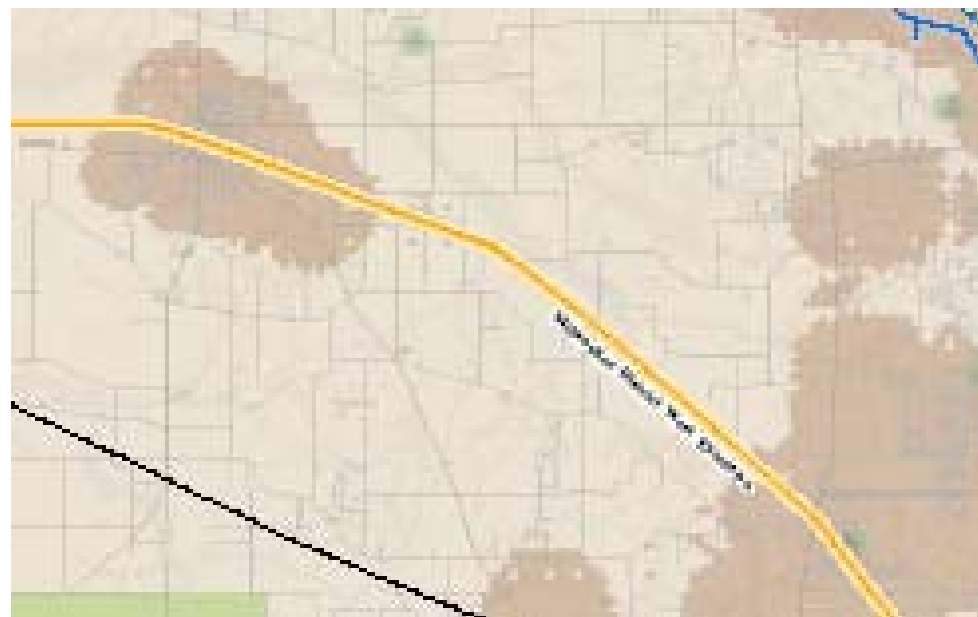
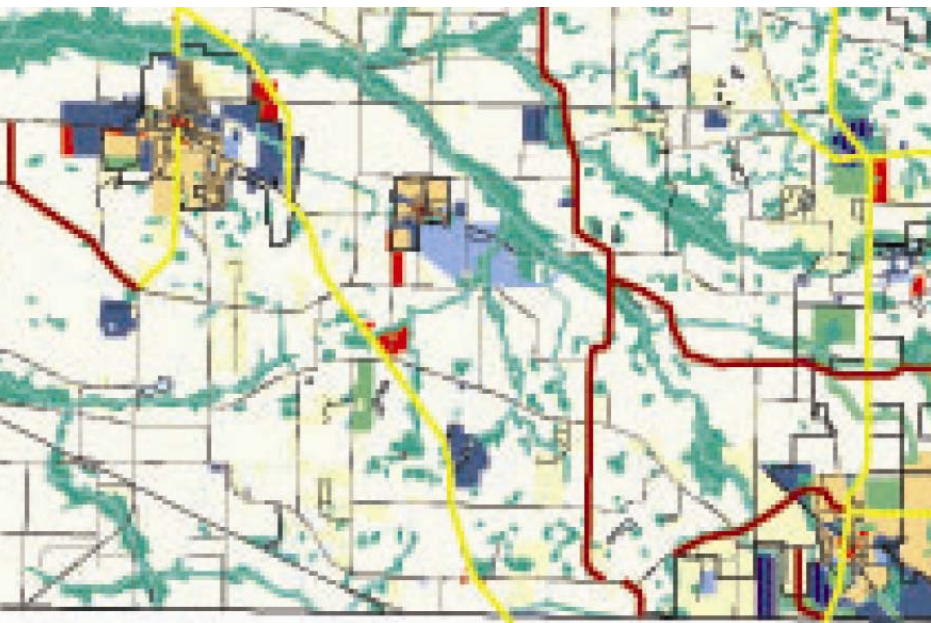
- Regional Plans
 - CATS Long Range Transportation Plan, Metropolis 2020, Common Ground
- County Plans and Ordinances
 - McHenry County 2020 Unified Plan
- Sub-County Plans
 - FPA capacity expansion applications, Route 47 Corridor Plan
- Local Plans
 - Marengo Comprehensive Plan Huntley Comprehensive Plan
- Bordering County Plans
 - Kane County 2030 Land Resource Management Plan

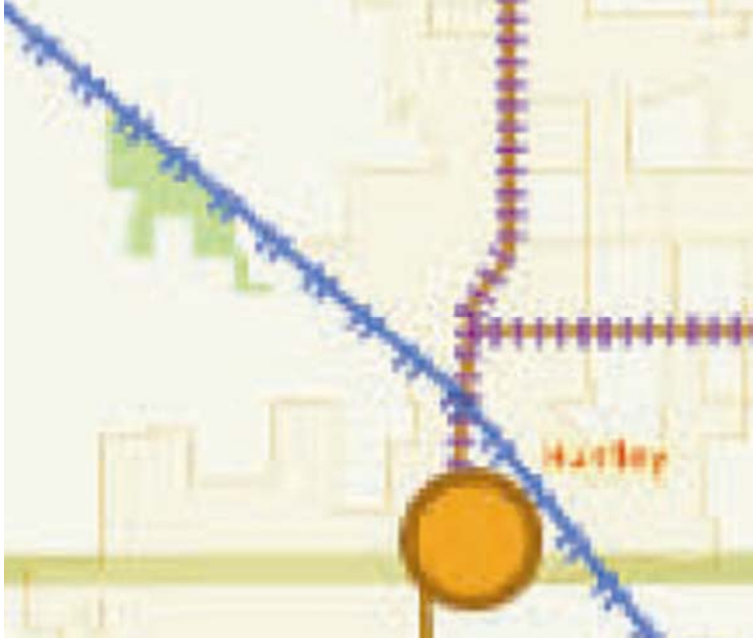


Common Ground
McHenry Unified Plan

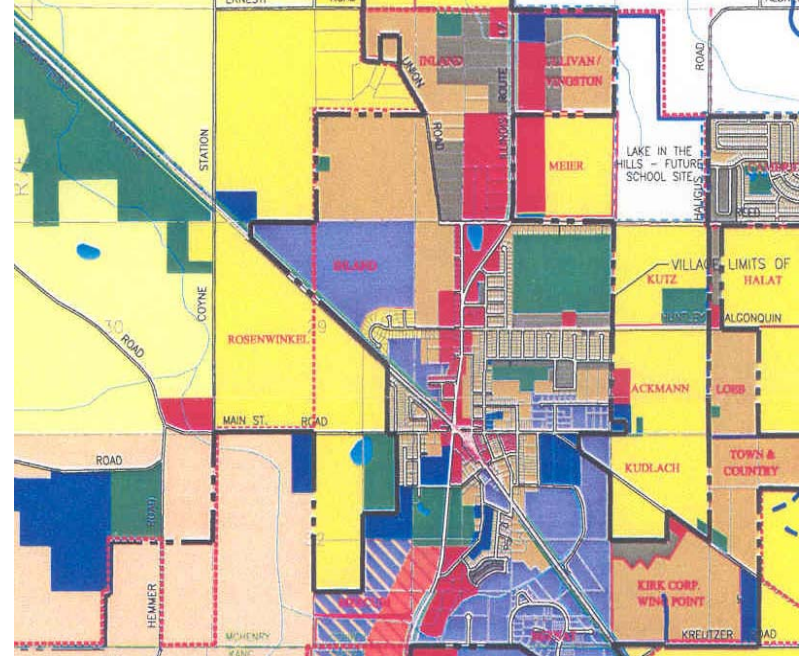


Metropolis 2020
CATS

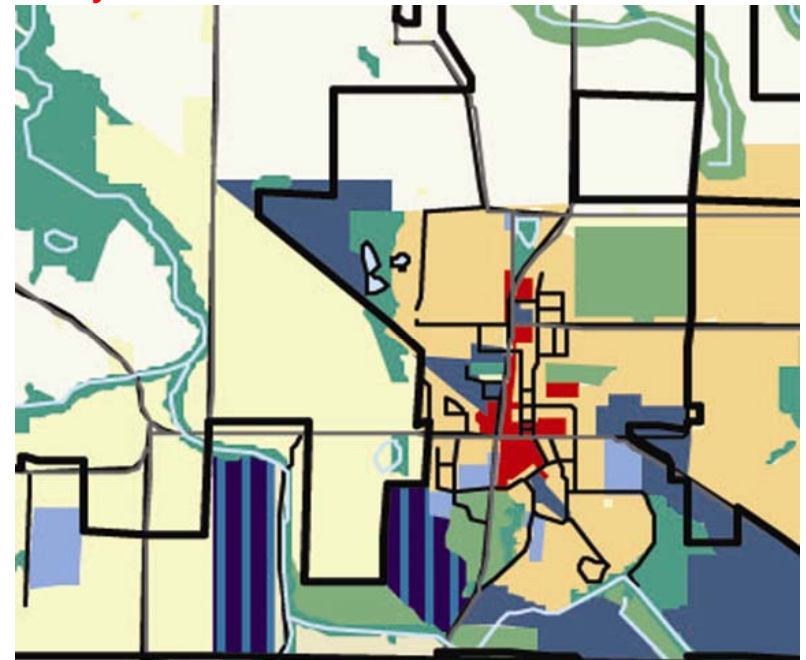
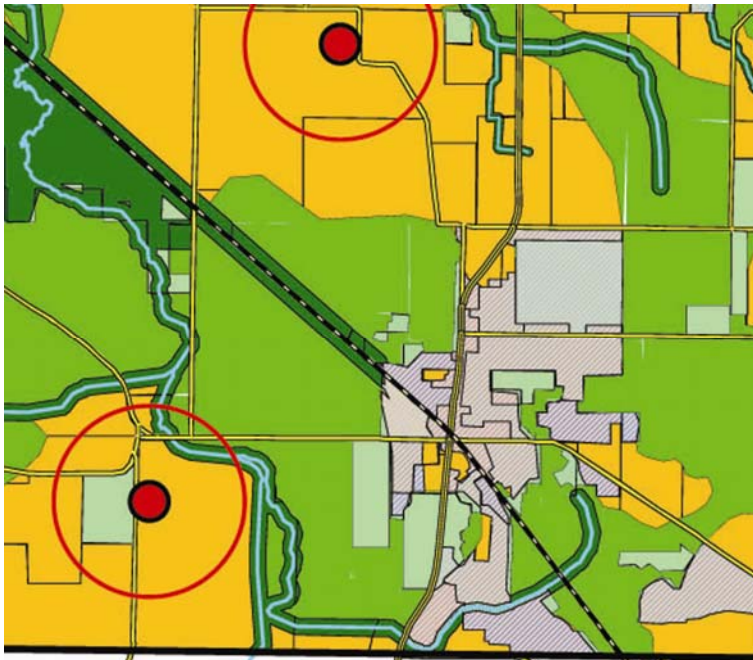


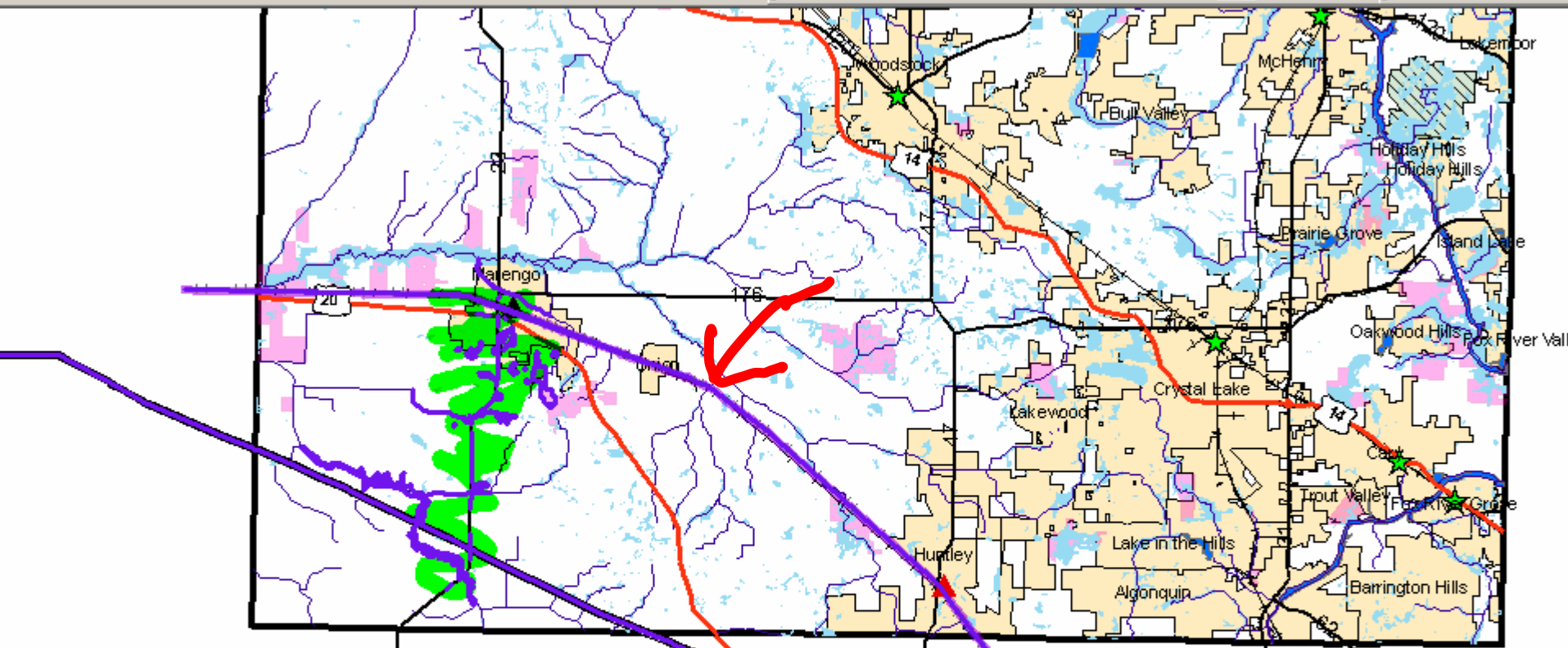


Common Ground
Route 47 Corridor Plan



Huntley Comp Plan
McHenry Unified Plan





Identify Results

Layers: <Top-most layer>

Location: (376624.416430 4674453.362815)

Field	Value
OBJECTID	132
AGENDA_ID	132
PLAN_ID	35
ACTION	Extend Metra Milwaukee District West line from Elgin to Huntley with a corridor continuing to Marengo.
GEOGREF	12345
CREATE_	
ADOPT	
IMPLEMENT	

Implications of McHenry County example

Consider plans from the plan users' point of view

Create a database of plans

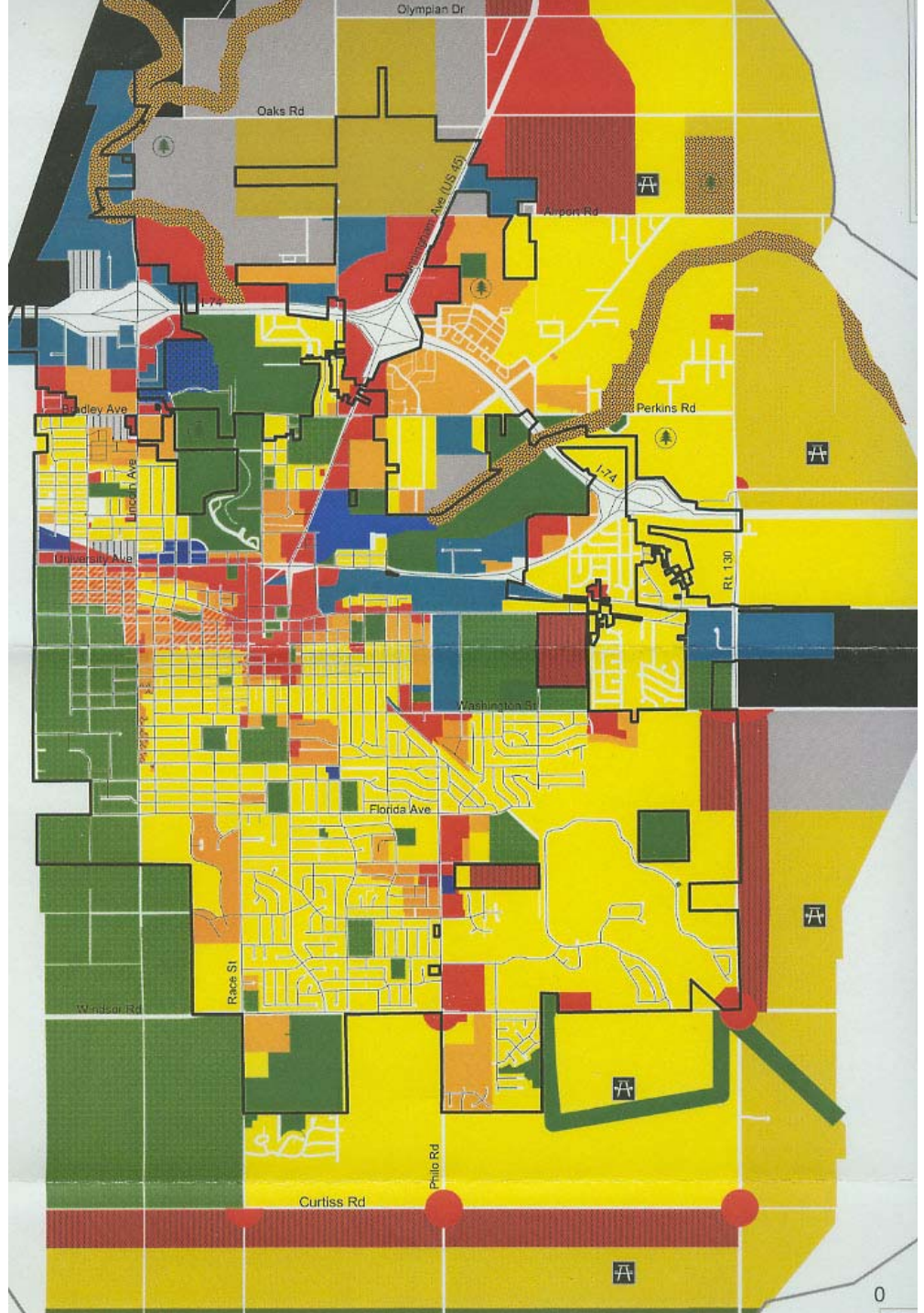
Create a user interface that supports use of plans

Urbana Comprehensive Plan 2005

-- framed to be included in an ISoP



Conventional representation
of land use type
as static outcome
without contingency
or explanation





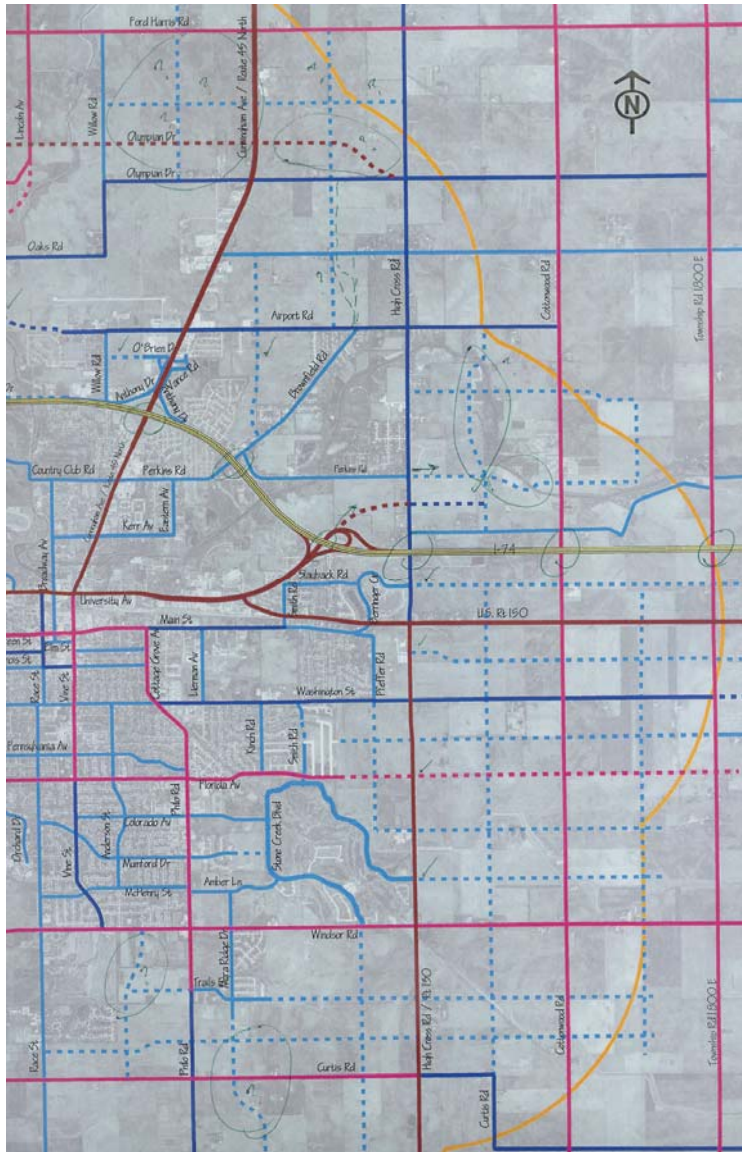
Northeast Urbana:

**Issues about
jurisdiction outside municipal boundaries,
rural residential development, and
transportation access**

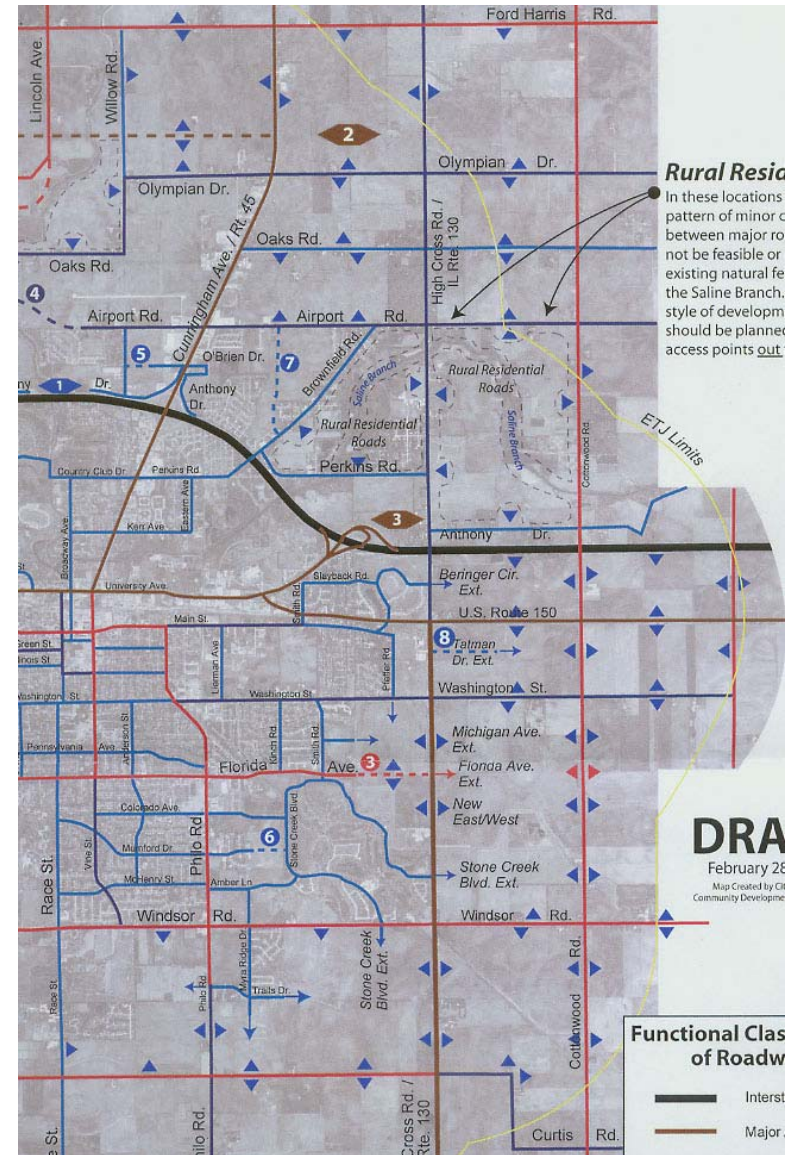
**Issues of land use regulation and infrastructure investment expectations
by actors beyond current residents control**

Planning process unusual opportunity to influence statements of intent

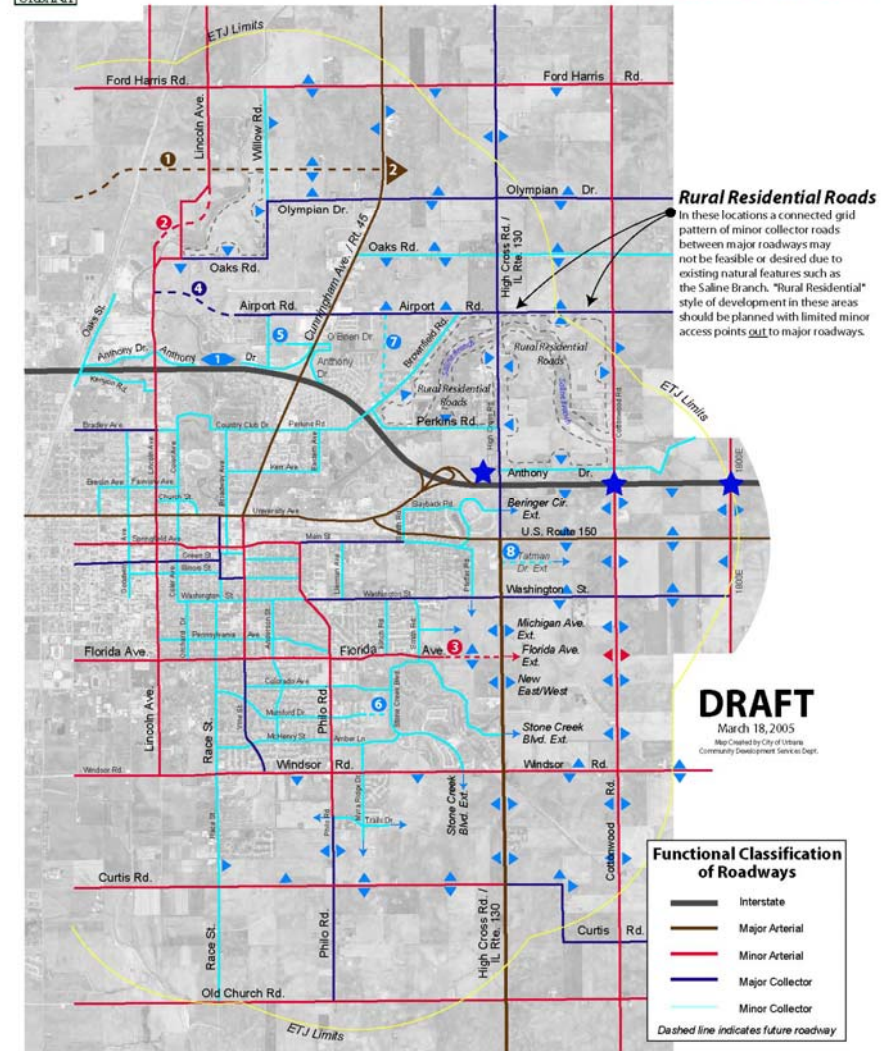
Earliest mobility map



Evolving mobility map



Mobility Map as Presented for Adoption



Planned Roadway Extensions Connections have been determined and planned for accordingly.	Potential Projects Projects identified as needing additional study to determine design, location, and function.	Extending the Grid System Extending a consistent system of collector and arterial roadways is critical to ensure adequate facilities are constructed in tandem with development. The map indicates general locations where the system shall be extended. The map identifies two different types of grid extension symbols:
<ol style="list-style-type: none"> Olympian Drive relocation and extension west from U.S. Route 45 Lincoln Avenue re-aligned north between Oaks Road and Olympian Drive Florida Avenue extended to east to High Cross Road Airport Road extended to Lincoln Avenue O'Brien Drive extended to Willow Road Mumford Drive extended to Stone Creek Boulevard North/South Collector between Brownfield Road and Airport Road Tatman Drive extended east from High Cross Road 	<ul style="list-style-type: none"> Anthony Drive connection between Lincoln Avenue and Willow Road Olympian Drive termination at U.S. Route 45 or continuation to High Cross Road Interstate 74 interchange alternatives when needed as Urbana grows east. High Cross Road, Cottonwood Road, 1800E. <p>Consideration of interchange alternatives to include:</p> <ul style="list-style-type: none"> Rural Residential Development Area Ecological Areas Horizontal and vertical alignments of intersecting roads Desired land use patterns 	<p>Direction and approximate location. The exact location of roadways and/or right-of-way dedication shall be determined depending on factors including (but not limited to) proposed development plans, natural features and safety needs.</p> <p>Pre-determined location for extension The desired location of roadways and/or right-of-way dedication is known though further study is required to determine the final design.</p> <p><i>Note: Colors indicate classification</i></p>

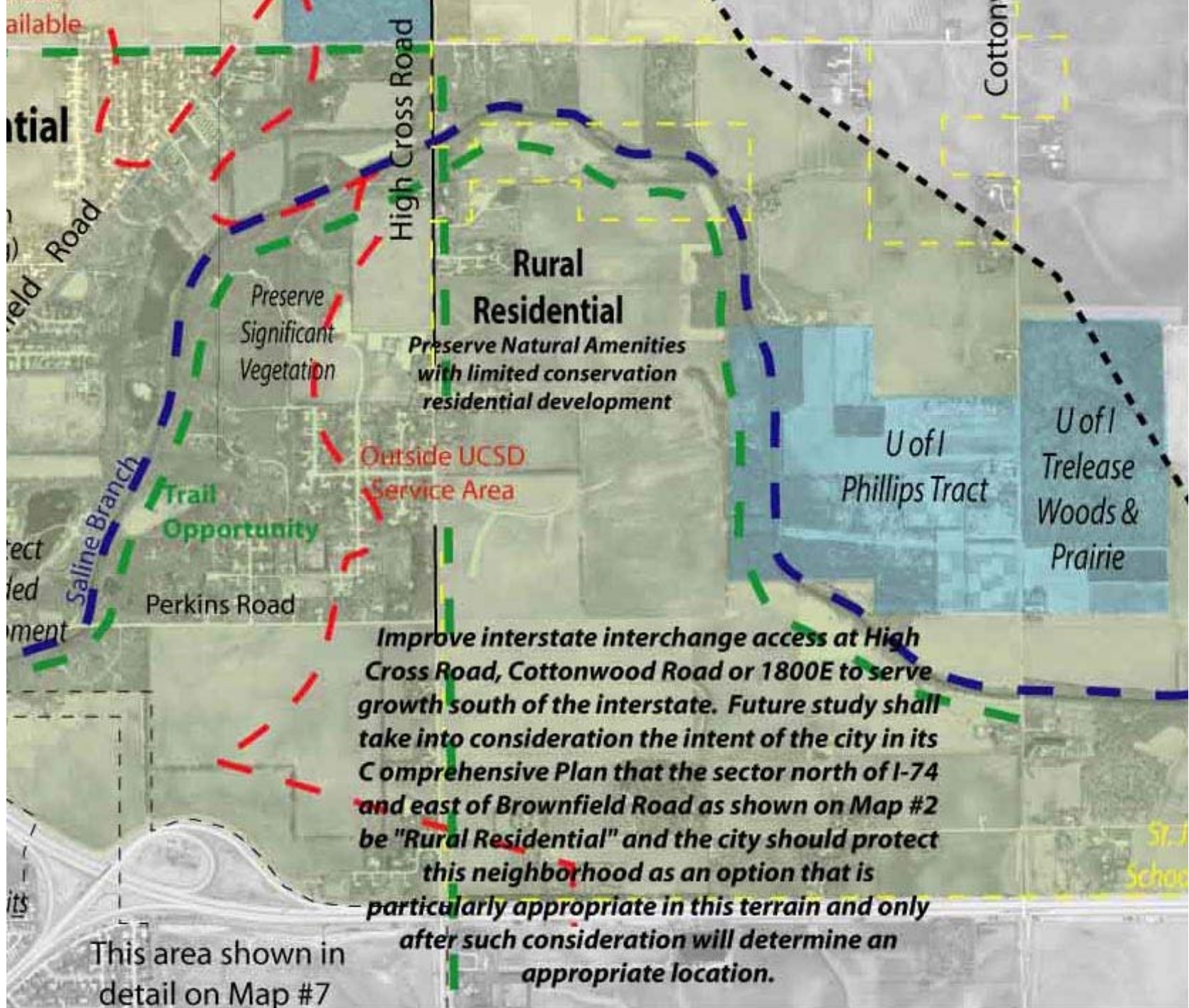
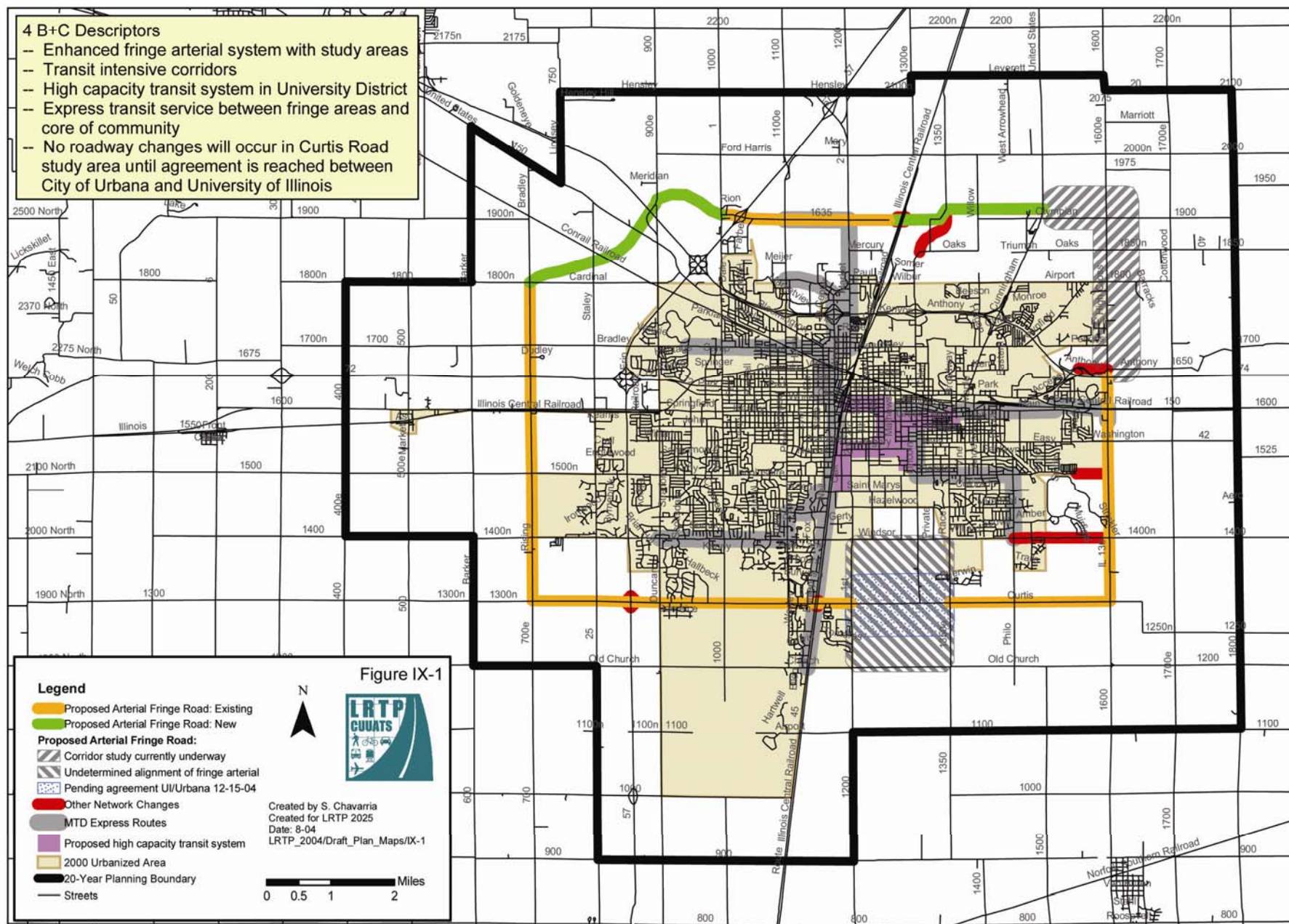
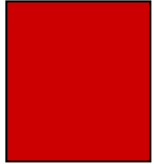


Figure IX-1: Preferred Alternative





Deliberations Visions, Goals, Reasons, and Actions

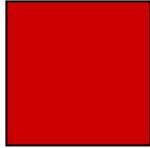
Most deliberations NOT about vision or goals

Almost all players used similar arguments
about conservation, energy savings, accessibility,
neighborhood conservation, revenue generation for schools,
retail and industrial in appropriate places.

Not environmentalists versus developers,
Not social concerns versus tax base in general

Deliberations focused on choice of actions
relative to tradeoffs among goals and interests,

Big question arguments not sufficient
to distinguish among choices of action

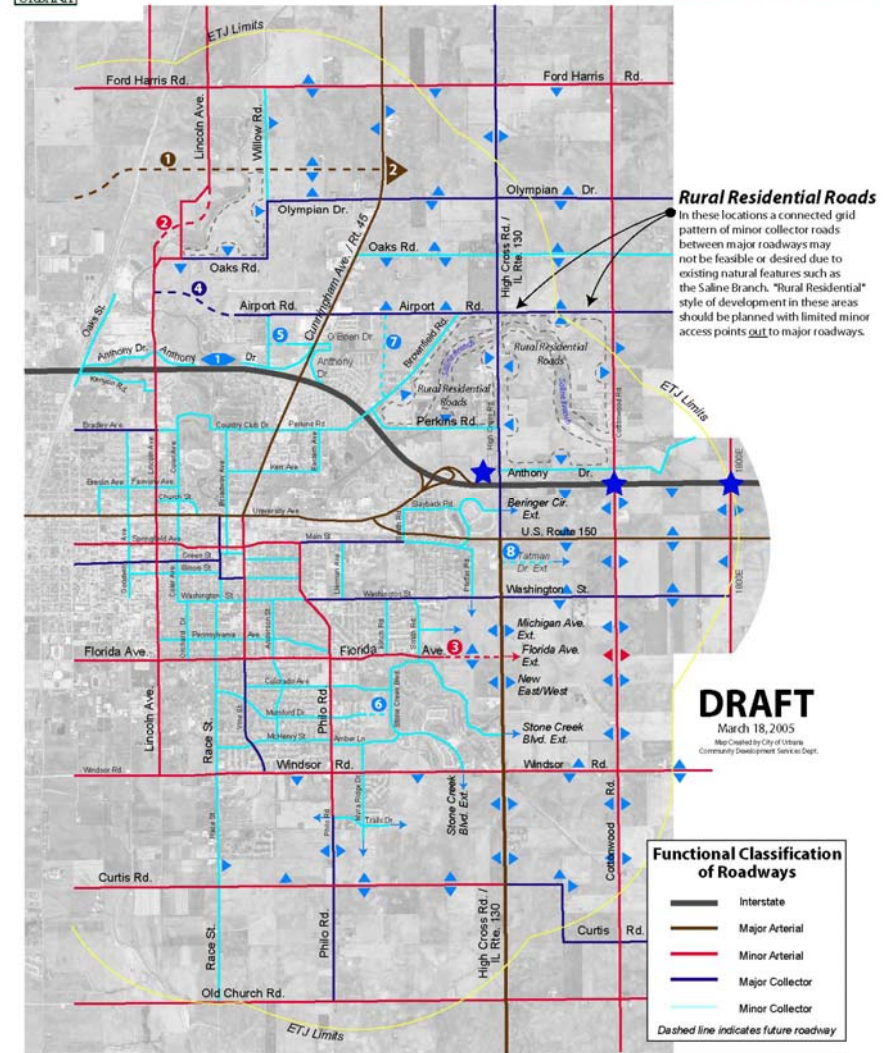


Uses of Plan since Adoption

Church parcel on South Philo Road

Campus edge rezoning

Mobility Map as Presented for Adoption



Planned Roadway Extensions Connections have been determined and planned for accordingly.	Potential Projects Projects identified as needing additional study to determine design, location, and function.	Extending the Grid System Extending a consistent system of collector and arterial roadways is critical to ensure adequate facilities are constructed in tandem with development. The map indicates general locations where the system shall be extended. The map identifies two different types of grid extension symbols:
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*Downtown style of development; Parking
business and services uses for
convenience of campus*

Nevada St.

Preserve
Neighborhood
Business

McKinley
Health
Center

Lincoln Ave.

corner Dr.

Single
Family
Residential

High
Density
Res.

University Residential

Busey Ave.

"Lincoln/B

Preserve the
now exist v
further encroa
density bu
unique re
(See parcel o

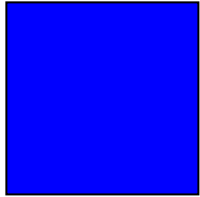
Iowa

Ohio

Resi
Urban

tutional
ademic

Goodwin Ave.



Implications:

For deliberation while making or using plans:

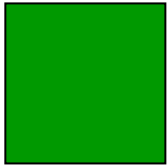
Representation must express
actions, intentions, and reasons

Envisioned outcomes not sufficient.

Plans must remain “alive”

3

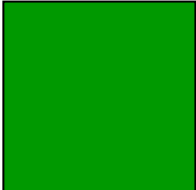
Opportunities to Improve Collaborative

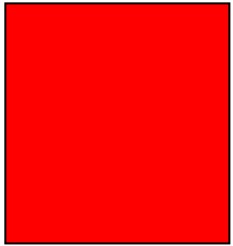


Landscape Planning Capabilities:

1. Develop and test tools to make and use
Information Systems of Plans (ISoPs)

2. Take inter-organizational leadership roles to
create, populate, maintain, and provide
access to ISoPs in particular places

1. Develop and test tools to make and use
 Information Systems of Plans
(ISoPs)



Tools and techniques to Build an ISoP

1. Authority & jurisdiction framework
2. Compendium of plans
3. System of plans database
4. Using plans interface

1. Authority and jurisdiction framework

Identify pertinent actors, players

Describe authority of these actors

From perspective of City of Urbana, Illinois:

Government actors:

City of Urbana

City of Champaign

Village of Savoy

Champaign County

Champaign Urbana Urban Area Transportation Study

Urbana-Champaign Sanitary District

Champaign Urbana Mass Transit District

Urbana Park District

Urbana School District

Champaign County Forest Preserve District

Champaign County Housing Authority

University of Illinois at Urbana-Champaign

Illinois Department of Transportation

From perspective of City of Urbana, Illinois:

Other actors:

Atkins Development Corporation

Fox Development

Lincoln Square, Inc

Carle Clinic and Hospital

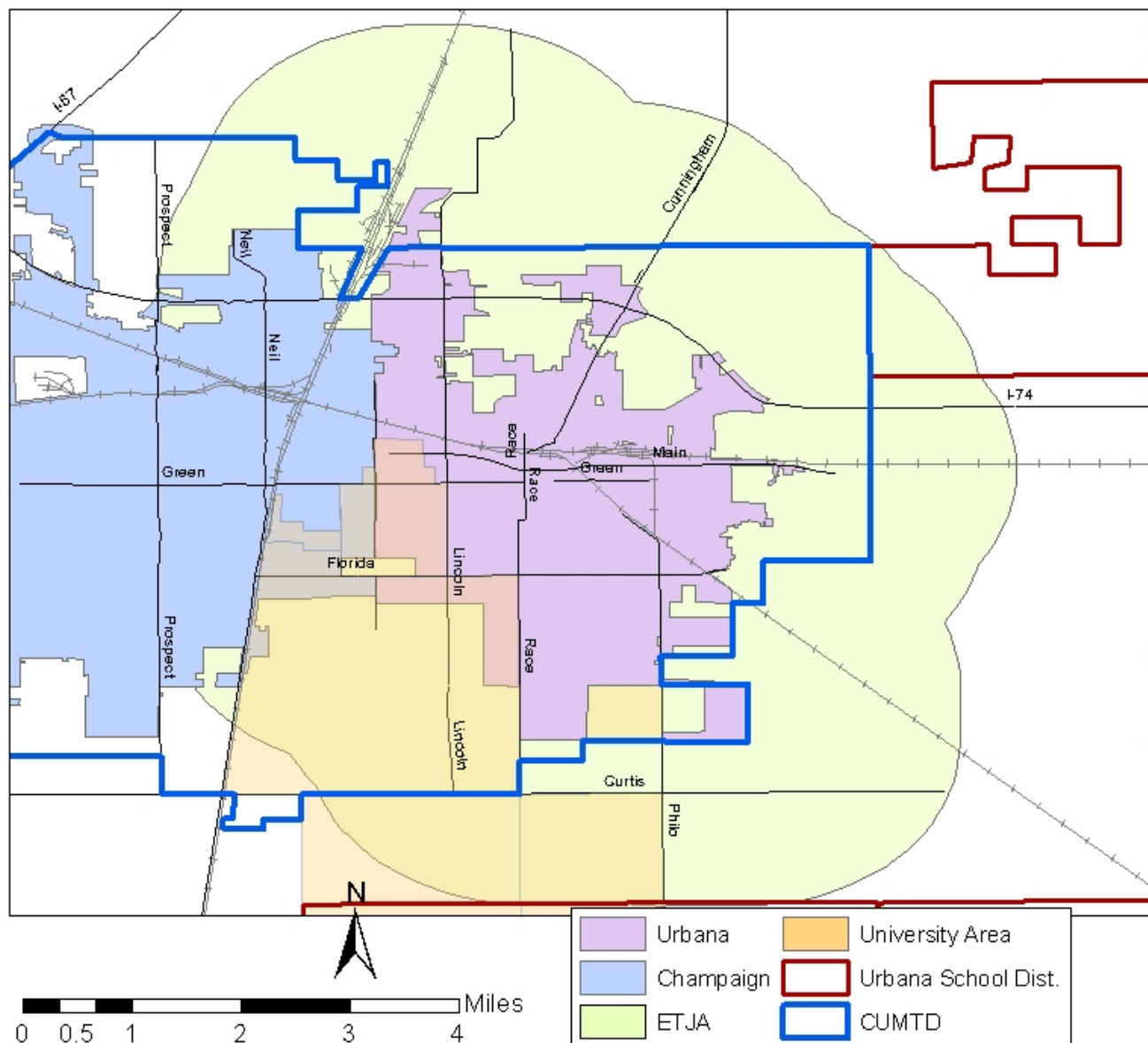
other developers

O'Brien Automotive

First Presbyterian Church

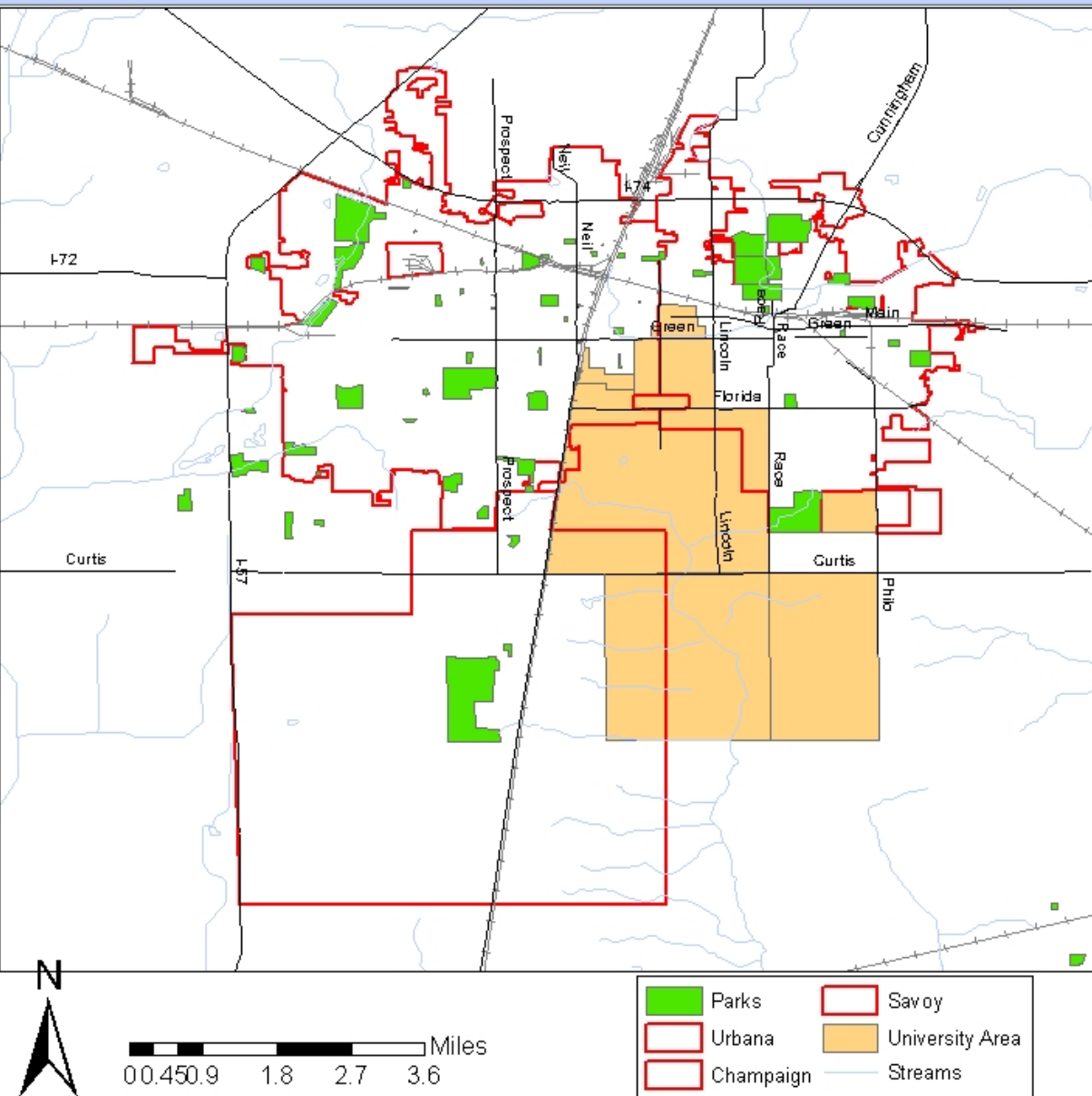
UCAN, WUNA, other neighborhood groups

CITY OF URBANA



	City of Urbana
Jurisdiction	Municiple Boundaries plus 1.5 miles ETJ. Home rule-right to overrule other governmental structure decision makers.
Rights to Acquire Land	Traditional government rights including eminent domain, police power, and escheat. May also annex land. Process includes a public hearing.
Structure / Decision Process	Mayor/Council government. Variety of Boards and Commisions appointed by mayor.
Funding / Revenues	Taxation (sales, property). Cunningham Township appears to be one legal entity for generating tax revenues. Their board is the same as the Urbana City Council.
Planning Norms (How often...)	Comp plan update every 20 years. Variety of other plans (I.e.downtown strategic plan). Planning Commission with 9 members. There is a specific Comp Plan Steering Committe.
What are they supposed to do?	(The Plan Commission prepares and recommends to the City Council(1) a comprehensive plan of public improvements (2) plans for specific improvements pursuant to said plan, (3) assists city staff charged with direction of projects embraced within the plan, and (4) reviews zoning map and text changes and special use permit applications. Members serve a 3-year term)
What do they do?	

PARKS



	Champaign Park Dist.	Urbana Park Dist.
Jurisdiction	Parks, recreational areas, trails, etc. in the city of Champaign.	Parks, recreational areas, trails, etc. in the city of Urbana.
Rights to Acquire Land	The Districts have the authority to acquire land and use eminent domain if necessary. They also trade or work with other districts. Possible to acquire land outside of their city boundaries.	
Structure / Decision Process	Municipal Corporation governed by 5 elected residents of Champaign.	Municipal corporation governed by a 5 member Board of Commissioners. The Board sets policy. Day to day operations are the responsibility of the executive director and staff.
Funding / Revenues	70% from property tax, rest from donations, sponsorship, recreational programs, federal and state grants.	90% from property tax, 5% from donations and miscellaneous, 2.5% from rental income.
Planning Norms (How often...)	The district updates its 5-year capital improvement plan every January. They have a master plan.	Comprehensive plans are usually updated every 3 to 5 years. The District also sets goals and objectives annually that are more specific to a twelve to eighteen month period.
What are they supposed to do?	Parks and recreation programs are the two major areas of operations. Plan, program, maintain, and regulate their land (parks, trails, facilities, greenways, open spaces). Can work collectively with other districts (ex: school) for development or trading lands.	
What do they do?		

Another perspective:

Northeastern Illinois Planning Commission

responsible to local governments and special districts

has little authority of its own,

but great opportunity to create shared infrastructure
for Information Systems of Plans

among municipalities, special districts

at range of geographic scopes

by identifying their

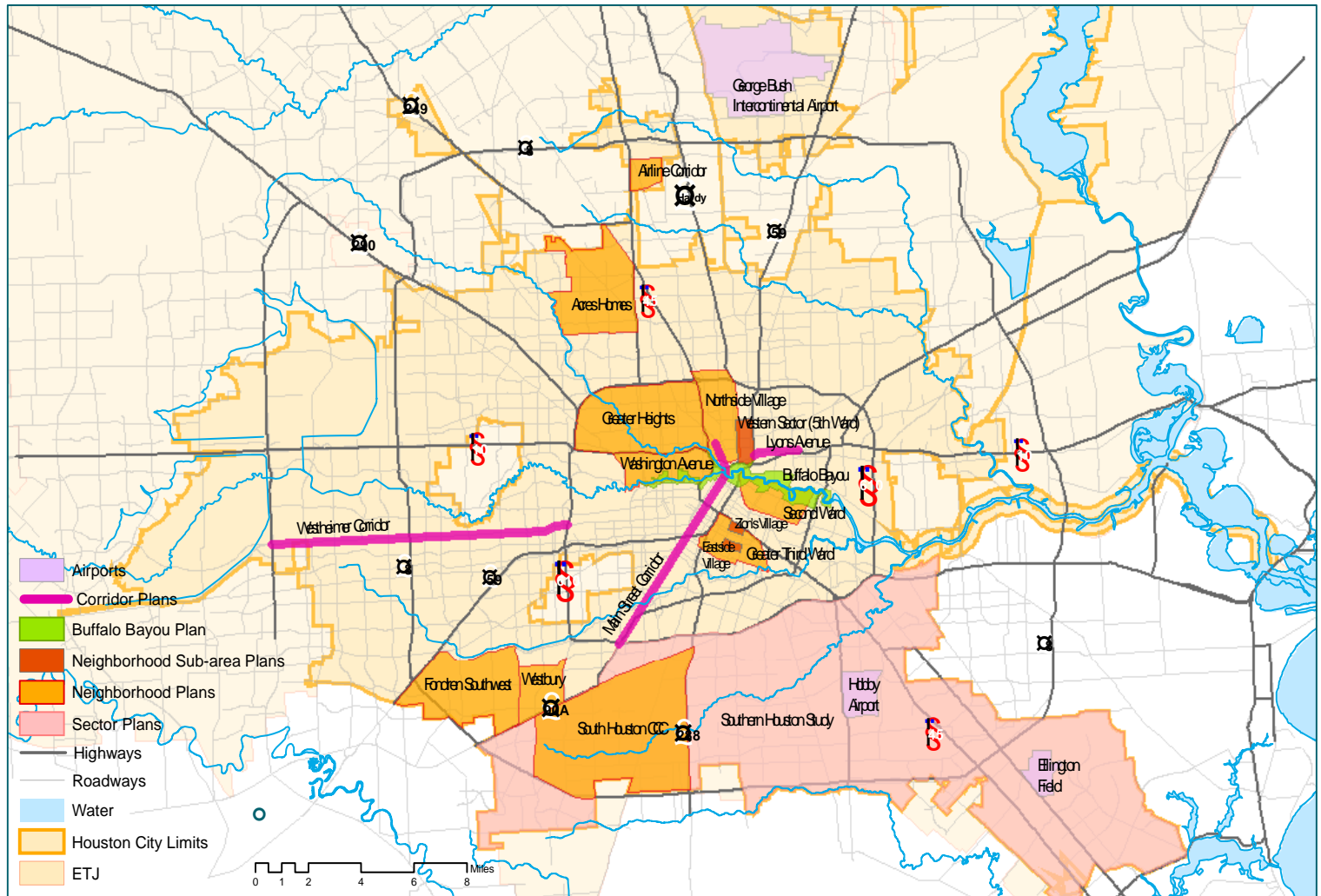
authorities, jurisdictions, and
planning practices

2. Compendium of Plans

Collect and abstract essentials of plans

Identify relationships among plans:
consistencies, conflicts, and gaps

interdependence among
actions and intentions



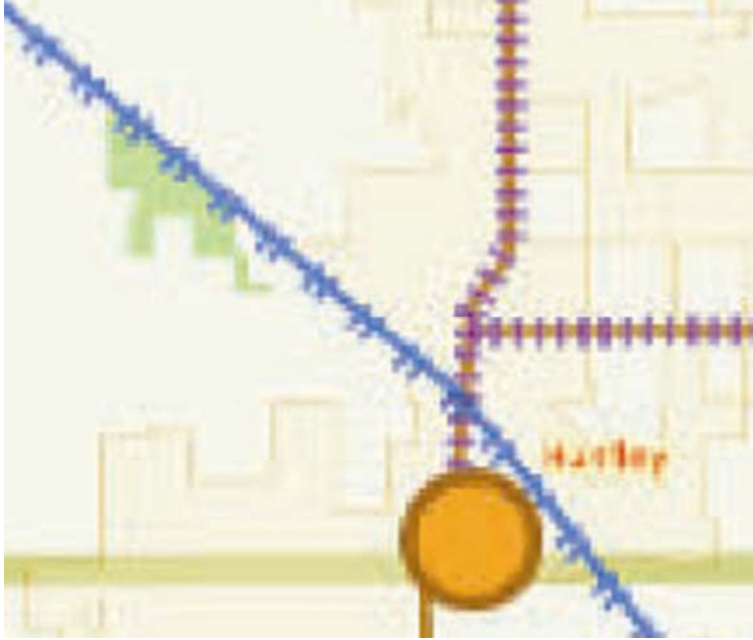
COMPENDIUM OF PLANS

HNTB and Steven R. Spillette

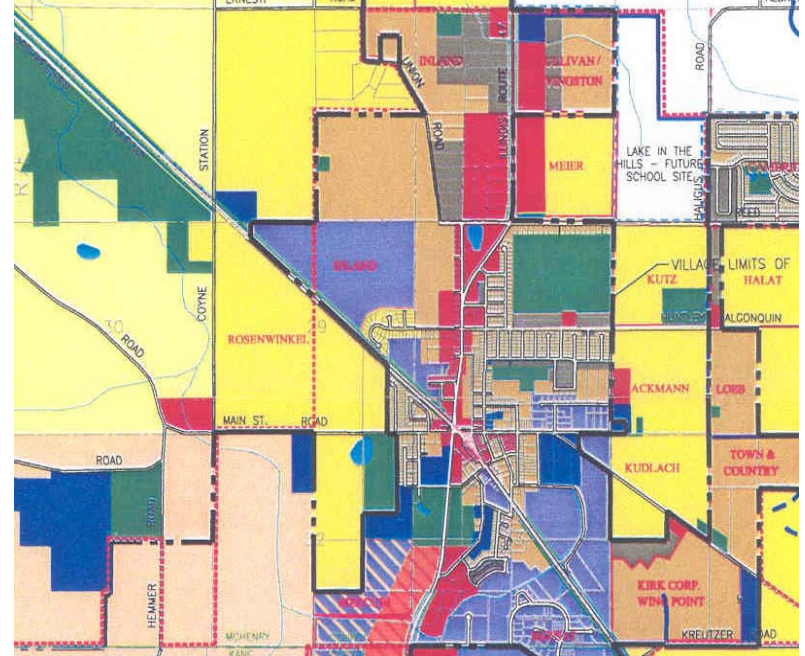
BLUEPRINT HOUSTON



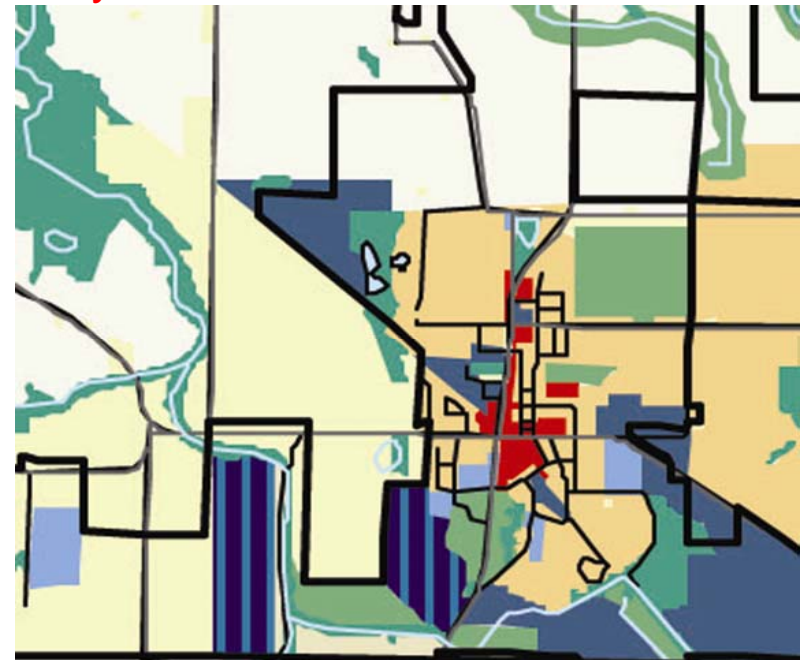
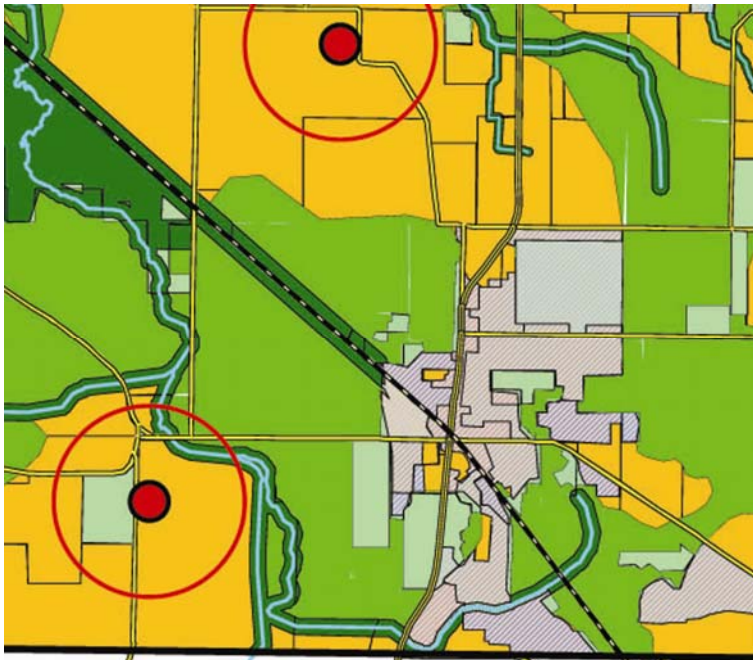
Spatial Scope of Plans



Common Ground
Route 47 Corridor Plan



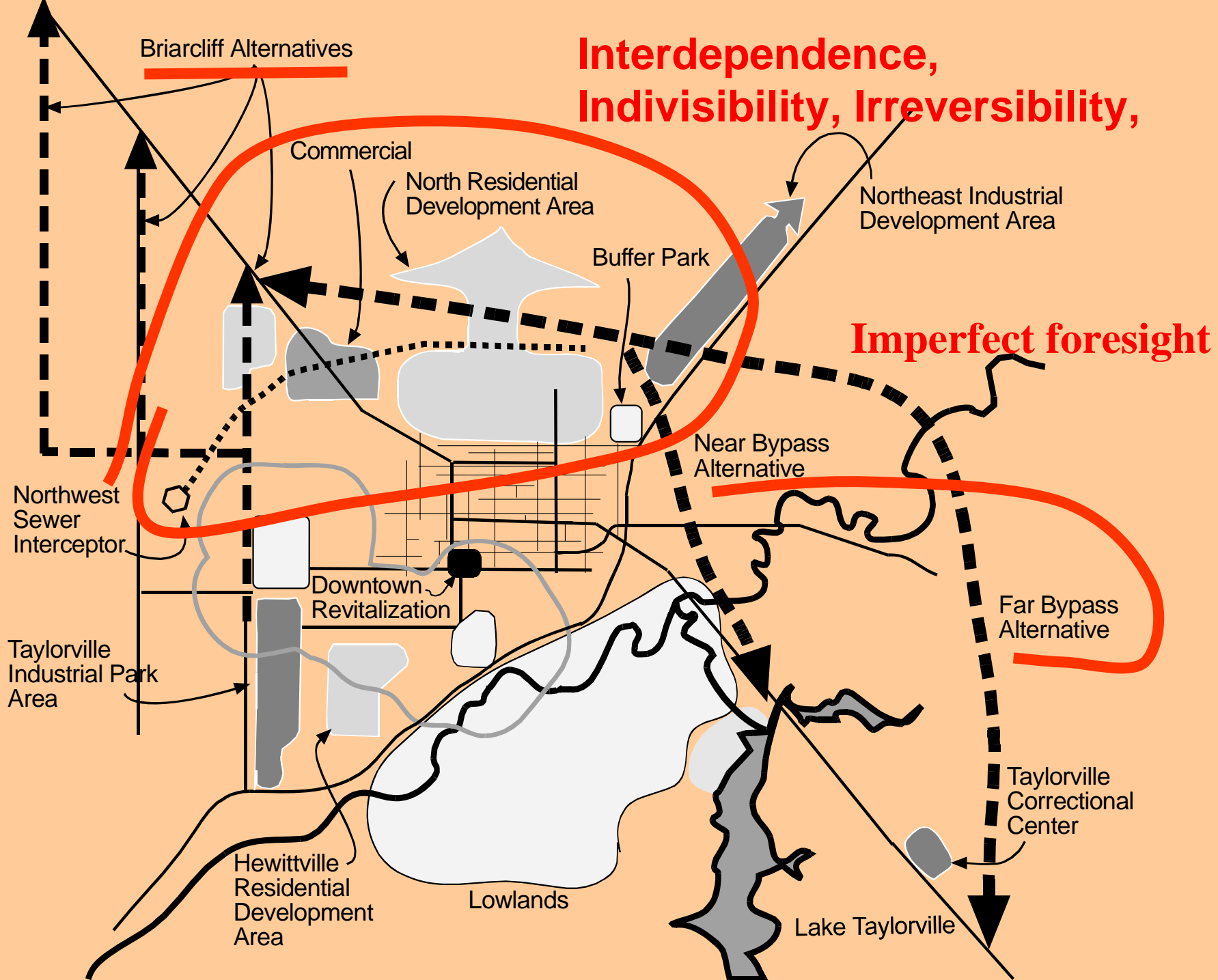
Huntley Comp Plan
McHenry Unified Plan

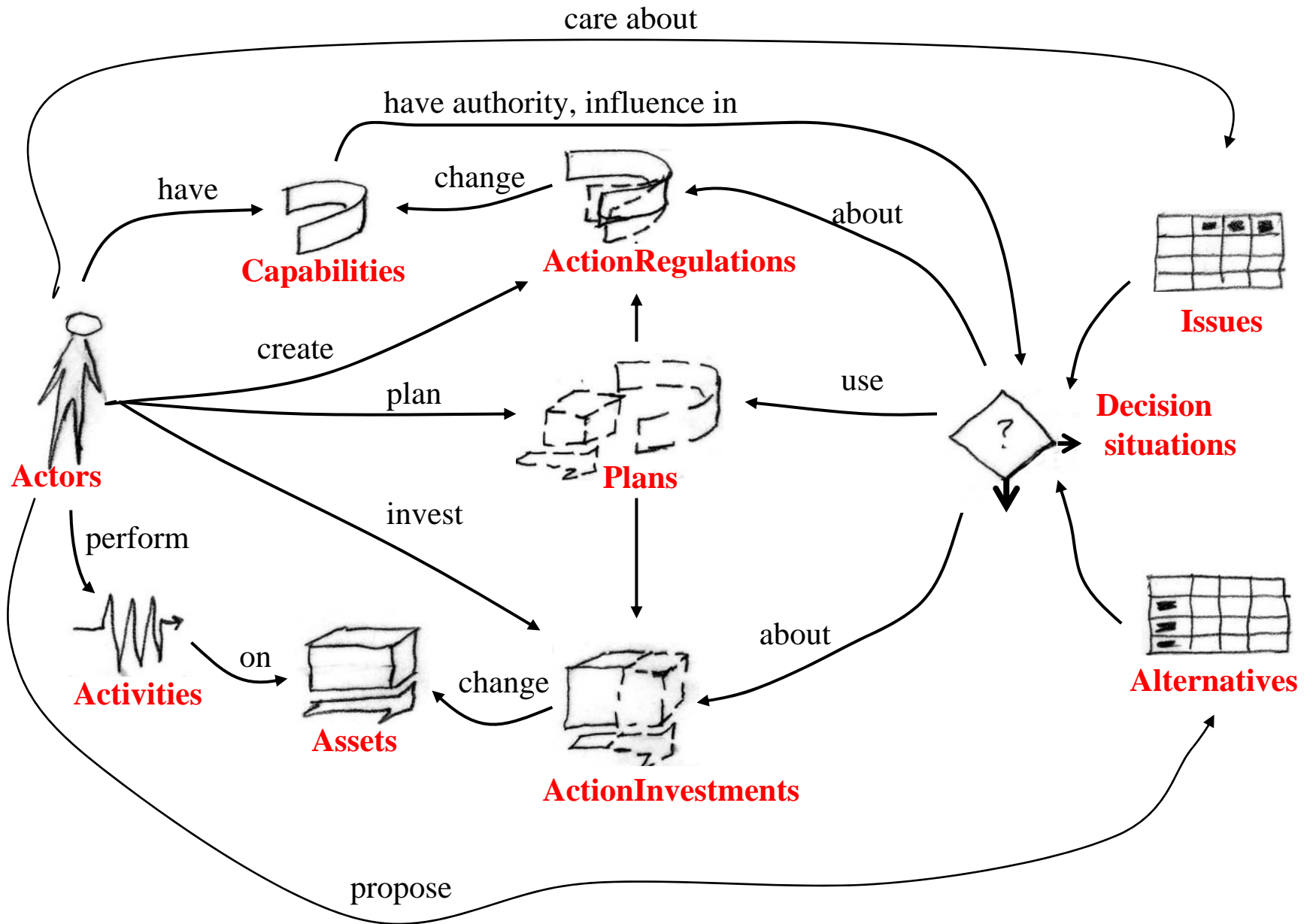


3. System of plans database

Planning Data model

Planning Markup Language



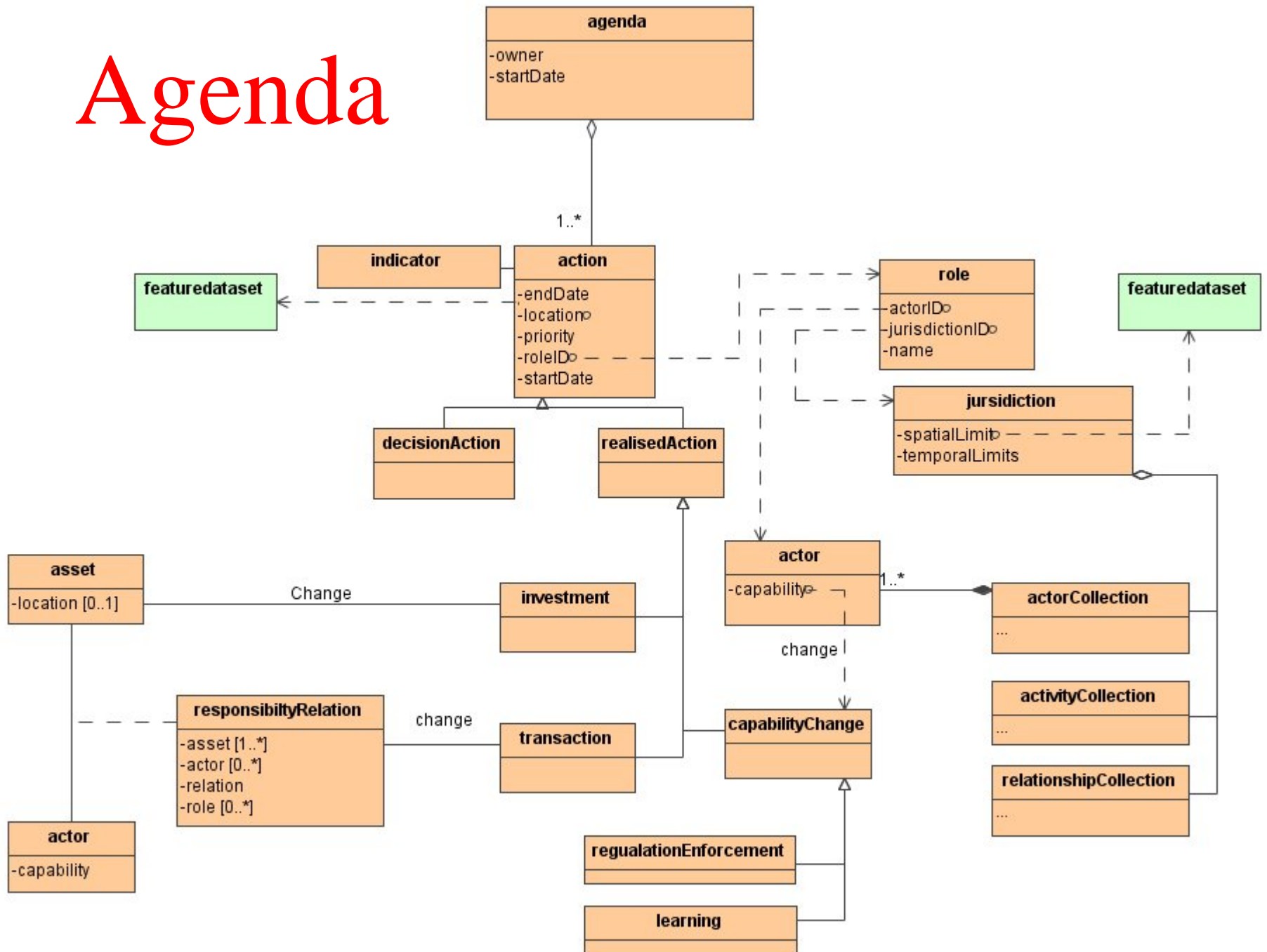


Entities for modeling plans and urban development

Agenda ID	19	20	21
Plan ID	1	35	35
Action	Extend Metra Milwaukee District West line from Elgin to Huntley with a corridor continuing to Marengo and Rockford, also includes an extension to Hampshire along a different route	Offer PACE Fixed Route service from the Marengo Metra station, serving Union and the IL 176 Corridor, and terminating at the Crystal Lake Metra station	Expand US 20 to four lanes between the eastern edge of Marengo to the Kane County border, ensure compliance with IDOT's SRA design standards
Citation	Pg149	AppendixEPg11	AppendixCPg20
Other Instances			
Contradicting Plans			
Notes			
Actor	Metra	Pace	IDOT?
Intent	Increase Transit Usage, see diagram	Increase Transit Usage	Efficient Movement of Goods/People

ScenarioObjects	PML classes
Mechanized Infantry Battalion	actor::organisation <i>(of organisations and roles)</i>
Headquarters Company	actor::organization
Rifle Company	actor::organization
Warrant officer	Role <i>when instantiated</i> actor::person
EnlistedMen	Role <i>when instantiated</i> actor::person
Vehicles	asset::equipment <i>assigned to</i> actor::organisation::MIB
Infantryfighting Vehicles	asset::equipment
Trucks	asset::equipment
Trailers	asset::equipment
Facilities	asset::facility::buildings
14185 Company Headquarters Building	asset::facility::building <i>with</i> activity::use::Headquarters
72111 Enlisted Unaccompanied Personnel Housing	asset::facility::building <i>with</i> activity::use::housing
73017 Chapel	asset::facility::building <i>with</i> activity::use::religiousService
Incrementally increase in facilities	action::realisationofAction::investments
71100 Family Housing, Dwellings	Δ asset:: Δ facility:: Δ building
85100 Roads, Cantonment, Surfaced	Δ asset:: Δ facility:: Δ network:: Δ physicalnetwork

Agenda

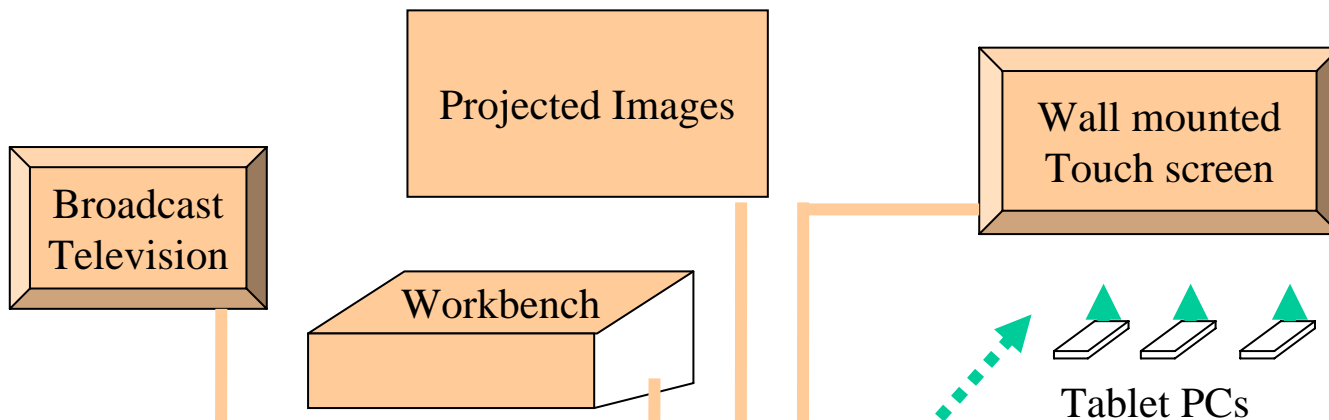


4. Using Plans Interface

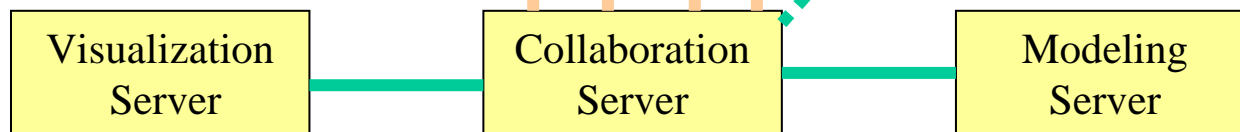
Human computer interaction

Content

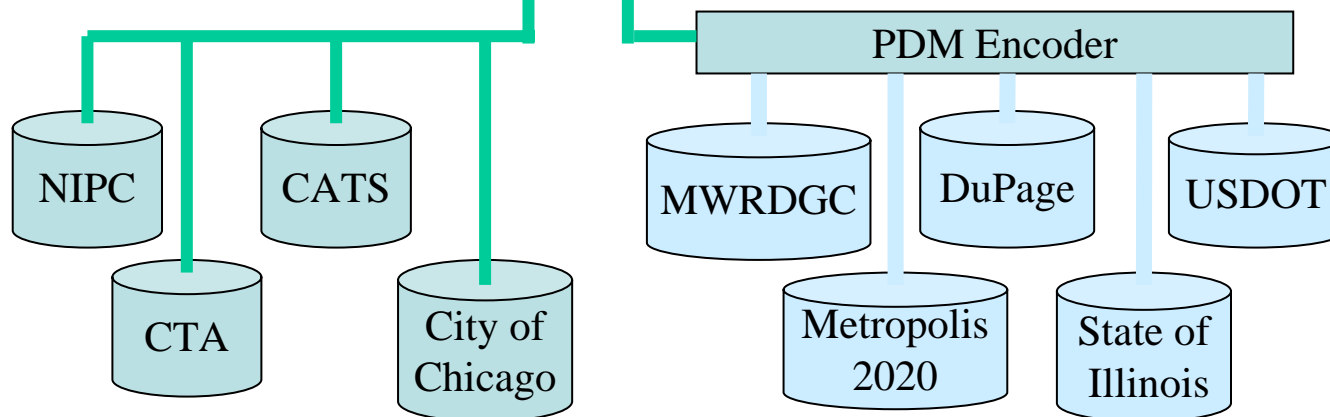
Interface Devices



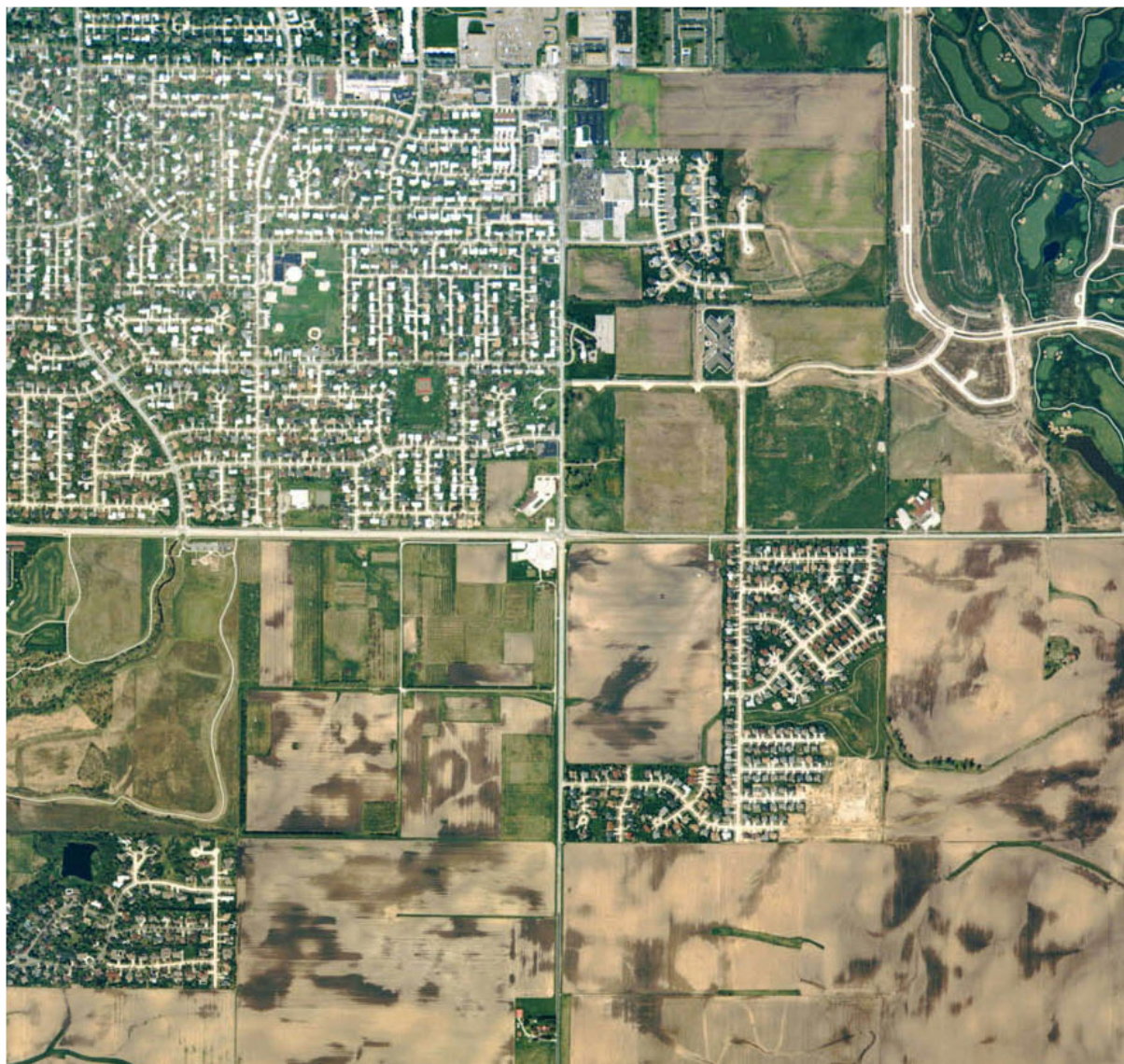
Tools



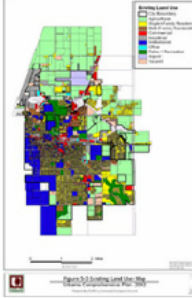
Data sources



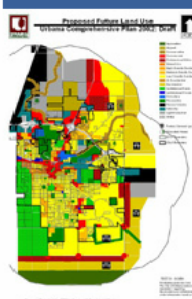
South Ridge Subdivision



Existing Land Use Map



Proposed Future Land Use

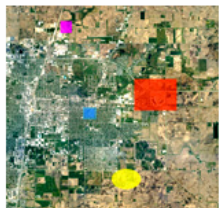


map3

Map4

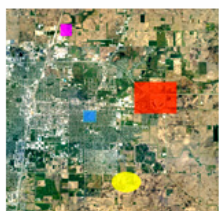
SESSION




South Ridge Subdivision



SESSION

South Ridge Subdivision



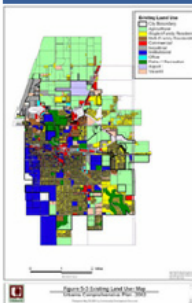
ASPECT	SPACE	TIME	DATE	MESSAGE
		N/A	June, 2002	<u>Curb Type</u>
		20 years	1982	<u>Dense Residential Use</u>
		20 years	1982	<u>Priority of Provision of Public services</u>

Dense Residential Use

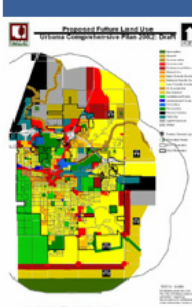
If	(Proposal for higher densities of residential use .)
Then	Encourage it where need and existing facilities can support such increased densities
Subject to Exception	Capacity of the existing facilities, like schools, sewage, water etcis not sufficient to support such densities.
Because	Urbana needs to expand the housing supply to include variety of housing types and price ranges through preservation, development and re-development

Plan Aspect:	Policy
Space Extents:	Urbana and ETJ
Jurisdiction	City of Urbana
Function	Density
Temporal Span:	20 years
Date of Adoption:	1982
Information Source:	Urbana Comprehensive Plan

Existing Land Use Map

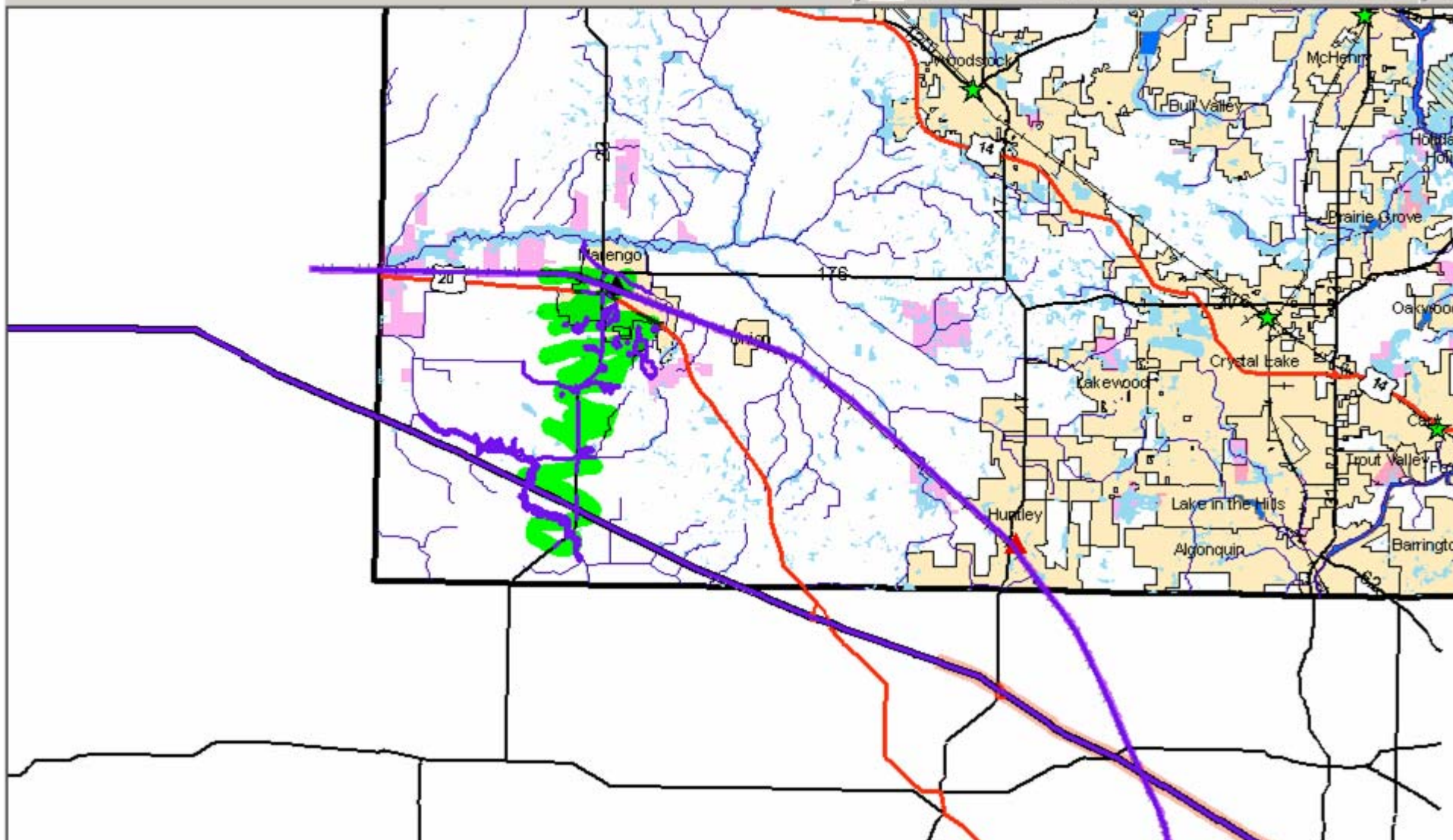


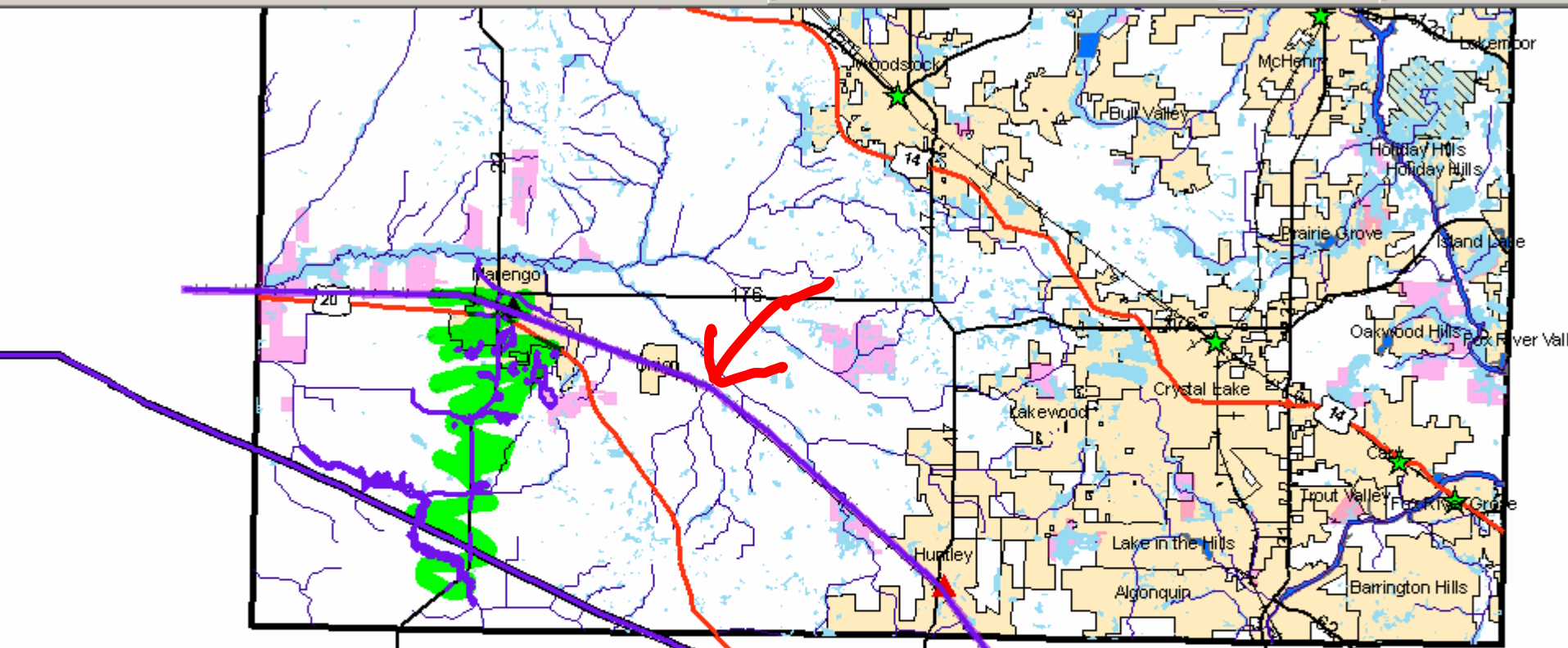
Proposed Future Land Use



map3

Map4






Identify Results

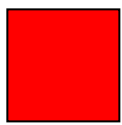
Layers: <Top-most layer>

Location: (376624.416430 4674453.362815)

Field	Value
OBJECTID	132
AGENDA_ID	35
PLAN_ID	12345
ACTION	Extend Metra Milwaukee District West line from Elgin to Huntley with a corridor continuing to Marengo.
GEOGREF	
CREATE_	
ADOPT	
IMPLEMENT	

2. Take inter-organizational leadership roles to
 create, populate, maintain, and provide
access to ISoPs in particular places

DOD is a major planning player



in regions of many military installations,
which have similar planning needs

Therefore, opportunity to lead in creating and sustaining ISoPs
for own use and use by other actors

oligopoly leader with incentives to undertake



establishing standards

design and development of tools and techniques, and

ISoPs for specific installation regions

Open GIS Consortium precedent of success through persistence

Imagine

US DOT and DOD mandating compliance for funded planning



Vision of Opportunities to Improve Collaborative Landscape Planning Capabilities:

1. Develop and test tools to make and use
Information Systems of Plans (ISoPs)

2. Take inter-organizational leadership roles to
create, populate, maintain, and provide
access to ISoPs in particular places